

Secure Data Transfer using Video Steganography

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Abstract: *Steganography, a well established practice of covering messages inside standard ones, has found restored significance in the mechanized age, encompassing various mediums like pictures, message, sound, and dynamically, accounts. With the climb of mechanized video correspondence worked with by open taking care of programming, video steganography has emerged as a basic space, wanting to embed data cryptically while staying aware of video quality. This study presents a sharp video steganography plot that unequivocally embeds limited data inside moving things perceived through object recognizable proof, utilizing focus repeat sub-gatherings to safeguard visual decency. Through quantitative and emotional evaluations, the proposed plot shows predominant execution to the extent that intangibility and strength against disturbance attacks, outflanking existing methodologies. Likewise, a flexible steganography approach custom fitted for HEVC accounts is proposed to direct bitrate addition and mutilation storing up. This approach utilizes thought net and PU fragment modes, close by Issue Cross section Code (STC) steganography coding and convolutional cerebrum associations, to overhaul the visual quality and bitrate execution. Preliminary outcomes confirm the feasibility of the proposed computation, showing better perceptual quality through cutting-edge strategies. In the end, careful testing against steganalysis techniques upholds the security of the proposed contrive, featuring its significance in working with covert correspondence and security affirmation in electronic video settings*

Keywords: Video Steganography, digital communication, covert communication, middle frequency sub-bands, imperceptibility, robustness, adaptive steganography, HEVC video, attention-net, PU partition modes, Discrete Wavelet Transform (DWT), Syndrome-Trellis Code (STC), visual quality, bitrate performance, privacy protection

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